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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/716,613   | 11/20/2003  | Noboru Saito         | 2593-0142P          | 6360             |
| 2292   | 7590        | 09/08/2004           | EXAMINER            |                  |
| BIRCH STEWART KOLASCH & BIRCH<br>PO BOX 747<br>FALLS CHURCH, VA 22040-0747 |             |                      | PATEL, PARESH H     |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 2829                |                  |

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/716,613

Applicant(s)

SAITO ET AL.

Examiner

Paresh Patel

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2004 and 20 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) 2,3,9-30 and 37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-8 and 31-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Election/Restrictions***

*pb* Applicant's election with traverse of species of fig. 1-3 (claims 1, 4-8 and 31-36) in the reply filed on 07/30/2004 is acknowledged. The traversal is on the ground(s) that "*it should be no undue burden on the Examiner to consider all Species in a single application*". This is not found persuasive because different species as disclosed in the last office action are different inventions.

The requirement is still deemed proper and is therefore made FINAL.

Claims 2-3, 9-30 and 37 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 07/30/2004.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4-8 and 31-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kiyokawa (US 5172049) in view of Tverdy et al. (US 5903163).

Regarding claims 1 and 31, Kiyokawa et al. (hereafter Kiyokawa) in fig. 2-3 discloses a device testing apparatus comprising:

a connection terminal (of socket for claim 31) [contact 31 of socket 30] to which an electronic device under test [10] is detachably connected;

a pusher [21] for pushing the electronic device in the direction of the connection terminal so as to connect the electronic device to the connection terminal;

a cooling unit (cooling fin for claim 31) [42] attached to the pusher for cooling the electronic device;

a temperature sensor [41] for measuring a temperature of the device [lines 10-25 of column 2].

Kiyokawa in fig. 2-3 discloses a device tester [see lines 30-31 of column 4 and lines 1-5 of column 5]. Kiyokawa do not discloses a controller for controlling a cooling output of the cooling unit (cooling fin for directly or indirectly cooling the socket of claim 31) **to cancel out heat generated by the electric device during tests and maintain the device constantly at a predetermined temperature** on the basis of a temperature signal output by the temperature sensor. However, Kiyokawa maintains the device constantly at a predetermined temperature [see lines 17-25 of column 2]. Tverdy et al. (hereafter Tverdy) in fig. 1-6 discloses a controller [42] for controlling a cooling output of the cooling unit [46, 40, 41] to cancel out heat generated by the electric device during tests [lines 1-4 and 24-31 of column 6] and maintain the device constantly at a predetermined temperature on the basis of a temperature signal output by the temperature sensor. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device tester of Kiyokawa with the

controller of Tverdy, in order to maintain a predetermine temperature at the device under test using a temperature sensor.

Regarding claims 4 and 32, Kiyokawa discloses all the elements of the claimed invention except for a chamber for maintaining a predetermined ambient temperature of the connection terminal to which the electronic device is detachably attached. Tverdy et al. (hereafter Tverdy) discloses a chamber [12] for maintaining a predetermined ambient temperature of the connection terminal [inherent to 28] to which the electronic device [11] is detachably attached. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device testing apparatus of Kiyokawa with the chamber of Tverdy, in order to house the device under test at a controlled predetermined temperature.

Regarding claims 5 and 33, Tverdy discloses: the cooling unit (cooling fin is part of cooling unit for claim 33) [46, 40, 41] includes an element for cooling by electricity [inherent to 46].

Regarding claims 6 and 34, Tverdy discloses: the cooling unit (cooling fin is part of cooling unit for claim 34) includes a cooling medium blowing means [40, 41] for blowing a cooling medium [a liquid nitrogen of 46] around the electronic device.

Regarding claims 7 and 35, Tverdy discloses: the cooling unit includes projections or depressions (cooling fin for claim 35) [22] for heat exchange for increasing cooling efficiency by blowing the cooling medium.

Regarding claims 8 and 36, Tverdy discloses: the projections or depressions for heat exchange are heat absorbing and radiating members [22].

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paresh Patel whose telephone number is 571-272-1968. The examiner can normally be reached on 8:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Tokar can be reached on 571-272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Paresh Patel  
September 04, 2004

A handwritten signature in black ink, appearing to read 'Paresh', is written over the printed name and date.